tellabs®

AN2100™ System

General Description

Technical Manual 76.2100/1

Revision A, 3/99

FCC Notification Statement

Federal Communications Commission (FCC) Rules require that you be notified of the following:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Tellabs Operations, Inc., in writing can void the user's authority to operate the equipment.

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1. Introduction

1.01 This manual describes the AN2100 system, applications, connections, architecture, and logical descriptions. The CraftStation is a windows-based application that can manage the AN2100 system. A description of the CraftStation's features and functional requirements is provided in this document. Refer to *AN2100 Provisioning, 76.2100/5* for more detail. The Operations and Maintenance features are also described in this document. For more details, refer to *AN2100 Maintenance, 76.2100/6.*

AN2100 System Overview

1.02 The Tellabs AN2100™ system is a network element for adapting time division multiplexed (TDM) based voice traffic onto an asynchronous transfer mode (ATM) backbone network. The system combines DS0-level cross connection, echo cancellation and ATM adaptation functions.

1.03 The AN2100 system adapts TDM DS0s (Digital Signal, Level 0) into ATM Virtual Channel Connection (VCC) cell streams using ATM Adaptation Level 1 (AAL1). An option to perform echo cancellation on individual DS0s also exists. Each DS0 can be assigned to an ATM VCC using a virtual channel identifier (VCI) and virtual path identifier (VPI). In addition, DS0s can be connected to each other within and among the two OC-3 TDM tributaries. Connection management is performed using a pair of Ethernet interfaces to an external controller. However, OSS management occurs using the Simple Network Management Protocol (SNMP) over a pair of Ethernet interfaces. An option for element management exists using Tellabs CraftStation software, which resides on a personal computer. CraftStation software provides access to alarm and performance management information.

1.04 The network topology using two AN2100 Systems and the control mechanisms required to establish and maintain a TDM-to-ATM and TDM-to-TDM connection is shown in Figure 1.1. This figure shows various network interconnections of the AN2100 also. Typically, the connection management system supplies provisioning information, such as Time Division Multiplexing (TDM) to Virtual Path Identifier/Virtual Channel Identified (VPI/VCI) addressing. The Operation Support System (OSS) is used to monitor the status of the network elements and network.

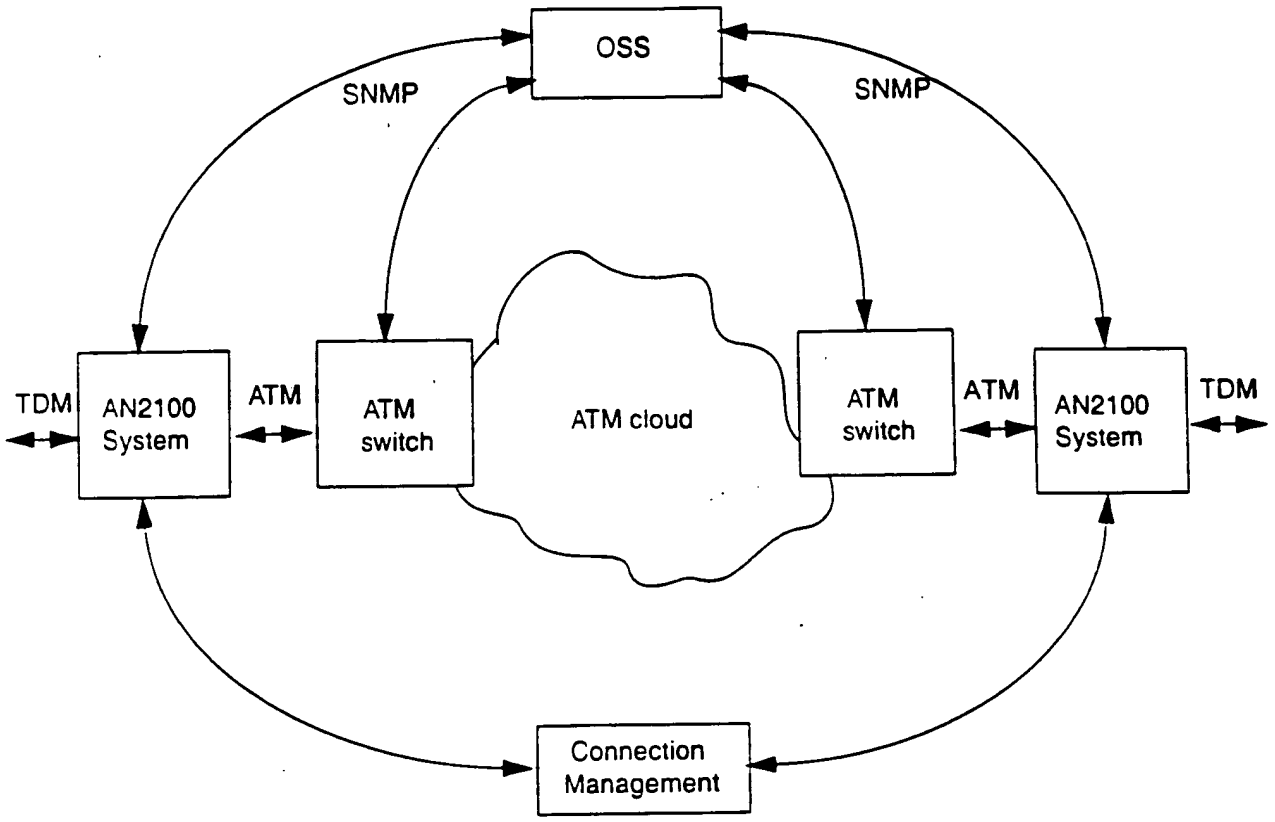

Figure 1.1 Network Topology

2. Applications

2.01 The AN2100 provides connection of local exchange to ATM. Refer to Figure 2.1.

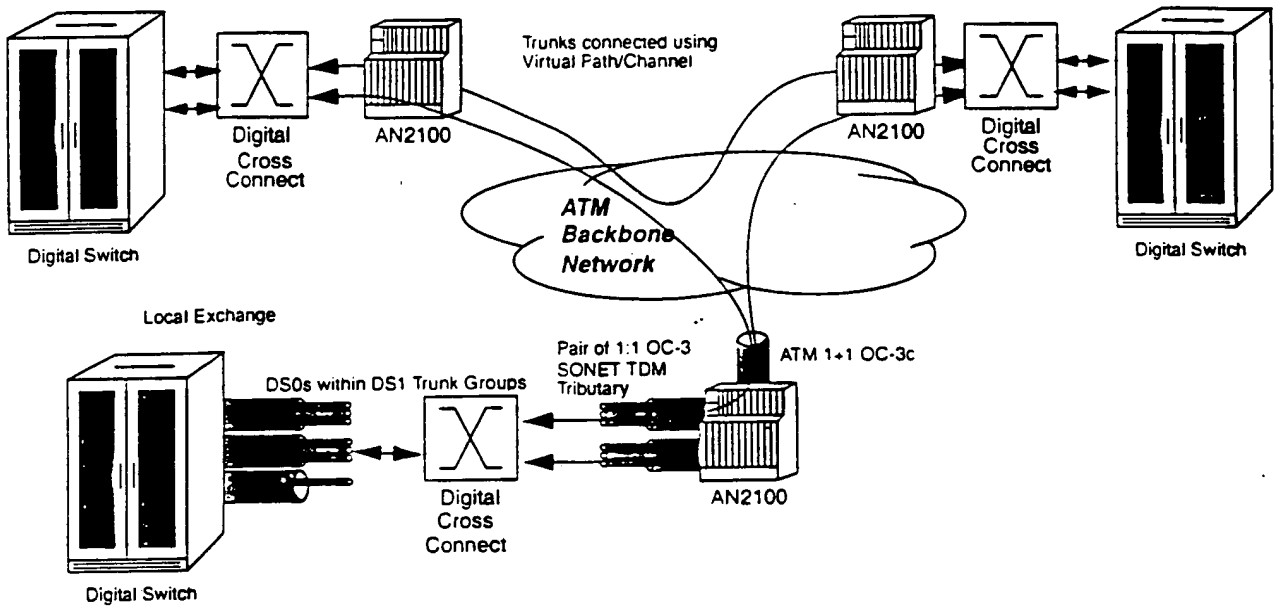

Figure 2.1 Intermachine Trunks Over ATM

2.02 Adapting local exchange traffic to ATM allows the traffic to be transported over an ATM backbone for the following purposes:

- Combining local exchange traffic with data to gain efficiencies of operation over a single network
- An additional level of protection in the ability to reroute using ATM-level connectivity

2.03 Thus, the AN2100 supports 2:1 concentration with the two working OC-3 TDM tributaries.

Features

2.04 The AN2100 provides the following features:

- AAL1 adaptation to ATM on a per-DS0 basis
- Per-DS0 echo cancellation
- High-speed, protected (1 +1 SONET) access on both the tributary (OC-3) and aggregate (OC-3c) facilities
- Selective mapping of 2016 individual incoming DS0s out of a possible 4032 to 2016 available ATM VCCs

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Scholtens et al.
Serial No. : 09/632,393
Filed : August 4, 2000
Title : CIRCUIT INTEGRITY IN A PACKET-SWITCHED NETWORK

Art Unit : 2662
Examiner : Michael I. McLoughlin

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF PAUL A. LEVY

I, Paul A. LEVY declare as follows:

1 I am an attorney employed by:

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2 In July 1999, Fish & Richardson P.C. received a written request to prepare a patent application in connection with the subject matter of the application identified above.

3 Fish & Richardson P.C. prepared and filed a provisional application including that subject matter on August 6, 1999.

4 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patents issued thereon.

Signature: _____ Date: March 19, 2004

Typed/Printed Name: Paul A. Levy